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ANCIENT EGYPT.

RESEARCH IN THE FAYUM.

THE work carried on this year by the British School on the Badarian age and early history of the Fayum, has been described by Miss Caton-Thompson and Miss Gardner ; from their letters the following extracts will show how strenuously results are being obtained. Sentences in brackets [ ] are added to explain the position. The number of workers made it needful to have two cars for the supply of water from fifteen miles' distance, and also for more distant research to the west of the lake.

" Near Dîmeh, December 14. We got settled here on the 9th, having stayed at Kom Ashim since the 4th. [This work at Ashim, or Wushim, by the Michigan expedition is the base for reaching supplies.] We got a good deal done at Kom Ashim, including an investigation of sections in the Bats cutting near Edwa, to examine the fauna of the lowest Nile alluvial deposits where they rest on the tertiary series. Then Miss Gardner and Mr. Sandford did a useful cross section near Kom Ashim with examination of the lacustrine beds at low levels. I spent a long day trying to find a practicable car route to the west end of the lake, which I am anxious to get examined and levelled before the winds begin. I got to a point some eight miles west of my furthest last year, and then had to give it up, beaten by the appalling going. One could actually get a car there no doubt, but it would not stand the strain two weeks, and probably less. [The whole of this north side of the lake was hitherto declared to be totally impossible for cars.] So I have changed the plans compulsorily and have established a camp half a mile south of the ruins here, which affords a good field for work, and gives me a good starting-point for again trying to find a way west.

" Dîmeh, January 13. It is becoming quite plain that we are dealing with more than one simple rise and fall of the lake within Pleistocene times. The difficulty of course is to correlate these periods with archaeological evidence. We have worked very hard at Ptolemaic levels, which we believe to have been lower than those usually accepted. In this area we have also identified, beyond question, a clearly defined shore-line at 189-190 feet above present lake [46 feet over sea] along which our prehistoric people are much in evidence. Contouring shows that water at this level would be confined within a big basin, full of eroded clays, lying to the west from here, which would appear to be entirely self-contained, and had no connection with the lake basin on the one hand, or the Qasr el Sagha basins on the other. On the slope down to the Birket Qarun, however, we have

got flint at 176 feet, on a ridge where it is difficult to conceive they have been washed. [32 feet over sea, submerged since 9000 B.C.] A fair quantity of pigmies with many pigmy cores have come from as low as 138 feet [6 feet below sea, submerged since 17000 B.C.].

"Dateable Ptolemaic houses lie at 172 feet [showing the later drying of the lake down to 28 feet over sea], and Roman levels (probably about Ist or IInd century A.D.) are best given by the Geziret el Qom cemetery at 66 to 78 feet above lake [dried to 78–66 feet below sea]. We have got through some detailed work on the great paved way leading north to the temenos walls [of Dîmeh] with its step termination . . . we feel sure that it has never had anything to do with water; nor is it all of one period; badly executed additions have been made which I have endeavoured to show in plan. We have also done careful levelling and planning of what appears to be an elaborate irrigation system lying to within some 600 yards of the N.W. corner of the Dîmeh mounds.

"I have got eight Quftis and two boys, beside the cook and chauffeur. The second car boy left ten days ago, as he could not stand the desert for £5 a month! He left at an opportune moment, as the car was out of action with obscure engine trouble. She has been in Medineh a week with the Ford people, and Dr. Askren is kindly keeping a watchful eye on her repair. With our remaining car we have kept up an adequate water supply, but had a moment of touch and go last week, when it broke down some twelve miles from Kom Ashim and eight from here. Luckily it was the return journey and the tanks were full. I happened to be there, having gone to Kom Ashim to identify some Ptolemaic sherds. As it was the differential gear which snapped, and the breakdown was complete, I ordered the chauffeur and Hofny to tramp back immediately to Kom Ashim, and get on to Fayum for help the next day. This they did, reaching Kom Ashim by a miracle on a moonless and starless evening. I tramped to Dîmeh by myself, and got in just as the last light was giving out. I rationed out the remaining water, two tumblerfuls per head for that night, and the next morning all the men went off to the broken-down car and replenished buckets and jugs from the tanks and returned with enough to relieve anxiety. Fayum was very prompt, and sent out mechanics and the necessary parts immediately [about 30 miles], and the car was brought in that same evening.

"Camp at Kom W., February 8. We are hard at work at the Kom [a settlement three to five feet deep] and it is producing a lot of the evidence we want. It has absolutely settled the question of the contemporaneity of the flints—the polished stuff—the pottery and the bone arrows. The only disappointment (and I hardly dared to hope otherwise) is that only the one culture is represented. We may be able to make out something of the pottery changes within its own range, but until I have finished I won't prophesy even about that. A complete pot is rare, only fourteen so far, but halves will come in equally usefully, and there are a number of them, besides rims innumerable. It is mostly coarse domestic stuff, but an element of better ware is there with a good polished red surface, though so far I cannot get the shape. The most interesting piece is a conical dish with a small foot [less foot than the dishes Pre. Late 86] in the usual coarse ware. We have not so far got a place deeper than 4 feet [of mound], but are only on the east fringe of the top of the mound. I am working it in 160-foot strips, 20 feet wide. I am on the work the whole time, and not a pebble has been found which was not in my hands immediately, and everything of importance is fixed on the latitude and longitude system. You must not expect a great heap

of stuff from it, but what I have got is quite invaluable for the purpose of introducing this new picture of prehistoric Egypt. There are practically no objects outside of flints—polished and chipped or ground celts—and pottery, but yesterday we got a disc-shaped limestone mace-head from near the top. The men are working admirably.

" Gertrude Caton-Thompson."

[Mrs. Benson now joined the camp till the end of February.]

The summary of work which Miss Gardner supplies is as follows :—

" The geology of all this area is most interesting, and the most important fact as far as the Fayum people are concerned, is that they were living on an old lake surface, not on tertiary rocks as had been supposed. We have found very clear evidence of at least two lakes, the older one, as far as it has been traced at present, is that mapped by Beadnell and given by him as + 23 metres above O.D. [75 feet, or 219 feet over lake]. The deposits consist of a thick series of greenish sands, and clays with occasional loamy bands generally full of shells. It is the harder sandy beds that give rise to the outstanding groups of rocks among which the Fayum people seemed to like to live. The white clays, which form such a striking feature in the depressions seem to be older than the sands, as they are overlain by them at the edges of the depressions. The old lake seems to have dried up and the deposits denuded very considerably before the waters of the second lake gained access to the Fayum. This was very clearly seen at Dîmeh along the E. and W. embankments in the West basin. The underlying rock was old clay deposit, hardened and cracked vertically. Further down the side, and in the bottom of the basin the old clays were overlain by softer grey clays lying horizontally on the older beds.

" There was an extremely interesting section quite close to the camp, which showed much the same thing, only there the overlying beds were loams and a well-worn gravel, the first we had come across. It consisted of flattened and rounded or oval pebbles of limestone chiefly, some sandstone and a little quartz. It contained a few shells of a type which, up to the present, have not been found in the older beds—Corbicula was among them, but is found in the older beds too. I suppose the conclusion is that both lakes were connected with the Nile. The gravels are at 187 feet above the lake, and form the surface of a small isolated flat-topped gebel, which appears to be entirely made up of lake deposit. The interesting point is that this gebel is at the same level as the south end of the plateau on which Dîmeh is built, which slopes down from the base of the mounds on the south side from 210·9 to 188·0 [feet over lake].

" It would seem from this that both tertiary and lake beds have been planed off at some subsequent period, and that since then an E. and W. drainage or erosion of some sort has left the isolated gravel hill.

" The old lake deposits are strewn with an immense quantity and variety of rock, while the younger series are much cleaner and smoother. We have been here, in our new camp, just over three weeks, though it seems about half the time. Miss Caton-Thompson is on the Kom all day, and is enclosing a note about it. While exploring one day to the east of the Kom Miss Caton-Thompson found another site—again lying on the north side of a depression in which water is at present lying. To the north is a fairly steep scarp which forms the divide between the Ghindi depression and those to the south. A considerable quantity of material was scattered about over the slope at levels varying between 203 feet

and 156 feet above lake [submerged since 14000 B.C.]. At the lower level there were a considerable number of pots, one of which Miss Caton-Thompson considers to be prehistoric, I believe. We found hearths at the higher levels. At the east end of the scarp there is a Vth dynasty mound overlying old lake deposits. Mr. Starkey was taken there one day by an Arab, and he told us about it, as he found Fayum flints mixed up with the pottery. As that area seemed an important and productive one, Miss Caton-Thompson advised taking the line of levels from the lake to the scarp and then westward to the Kom. The height of the Vth dynasty mound is 225 feet, too high, I suppose, to be of much interest as far as lake levels are concerned. I have finished that stretch—about five miles—and am now on the last lap. We were over in that part last market day, and fell in with an Egyptian on the Desert Surveys—who had just mapped the area between Cairo and Ghindi; he gave us one or two heights for prominent points, which will be most useful.

"There is an interesting section in a wady between here and the new site, which again shows gravels, but of an entirely different type. They are full of flints, mostly wind-worn, and contain a fair number of rather large, thick-shelled Corbiculas. I am especially interested in these as they are very similar to those in the gravel underlying the Dîmeh paved way. The gravels overlie a greenish sand, which passes down into white clays at the bottom of the wady, so I suspect that the whole series belongs to the older lake beds. The surface of the gravel is, I should judge, about 185 feet above lake level [submerged since 8000 B.C.]; a considerable number of Fayum implements were found on it.

"The second car has come back at last, and goes very much better; the new chauffeur comes from Aswan, and seems to be shaping quite well. We have just come back from a market-day expedition to Widan-el-Faras—it is a marvellous feat to have got the car up to the higher plateau—it looks a complete impossibility from below. It was an ideal day, and there was a most magnificent view from the top. It is a most fascinating country from every point of view, and I am enjoying every minute of the time. It is a great pleasure to work with Miss Caton-Thompson, and a very great help to be able to discuss geological problems with her.

"The telescopic alidade is a great success; thank you very much for providing it, it saves hours of labour in taping and simplifies the mapping enormously as I can pick up sights miles away.

"When these levels are finished I want to link up this area with Qasr el Sagha, and then I hope to spend a day or two at the west end of the lake, when the scarp comes close to the shore. I want, if possible, to find out if the same sequence of beds occurs there, and the levels of all the lake beds at that end.

"Domestic problems are arising, our dinner flew away on the return journey from market, and a substitute must be provided, also you will be getting tired by this time of all this geological talk.

"ELINOR W. GARDNER."

These extracts will show how strenuously the long-delayed study of the history of the Fayum is now being carried out, and how it promises to give a firm basis for the early history of the civilisation of Egypt, linking the archaeology to the close of the geological changes.

F. P.

FEUDAL CURRENCY IN ROMAN EGYPT.

THE hoard of late Roman coins found by Mr. Brunton at Qau el-Kebir last year has proved on detailed examination to present one novel feature of interest, besides throwing some light on the currency of Egypt about the year A.D. 500.

The number of pieces included in the hoard was 2,741, which may be summarily classified as follows :—

(1)	Coins struck before A.D. 300	8
(2)	Imperial issues, Constantine I—Jovian	157
	Defaced pieces, apparently of this period	70
(3)	Imperial issues, Valentinian I—Honorius	428
	Defaced pieces, apparently of this period	183
(4)	Imperial issues, Theodosius II—Zeno	208
	Defaced pieces, apparently of this period	45
(5)	Barbarous imitations of coins of group (3)	370
(6)	,, ,, ,, (4)	86
(7)	Miniature copies of coins of group (1)	2
(8)	,, ,, ,, (2)	142
(9)	,, ,, ,, (3)	146
(10)	,, ,, ,, (4)	197
(11)	,, ,, ,, (5)	105
(12)	Miniature copies of Axumite coins	16
(13)	Miniature copies not definitely identifiable	196
(14)	Totally illegible	382

The date of burial of the hoard can be fixed fairly closely. There are only a few coins of Basiliscus and Zeno, and these are hardly worn at all. The specimens of the issues of Leo I are very numerous, and also for the most part in fresh condition. There is no trace of anything later than Zeno. So it is safe to conclude that the hoard was formed and secreted in the early years of the reign of Zeno, about A.D. 480.

The composition of the hoard, in most respects, is similar to that of other Vth century hoards found in Egypt, the great bulk of it is made up of coins, in all stages of wear and decay, issued from the imperial mints after the reform of Diocletian had introduced into Egypt the monetary system of the rest of the Empire, together with barbarous copies of these issues; but mixed up with these are a few earlier coins which were demonetized by the reform, such as the bronze of the local Alexandrian series, or which never had any legal currency in the country, the earliest of the latter being a bronze coin of Neandria in the Troad struck in the IVth century B.C. The new element in this hoard consists in the large groups of miniature copies, many of them fairly well executed, which merit a special note.

These copies differ markedly from the cast forgeries of contemporary currency, which are commonly found on Egyptian sites in the strata of the first half of the IVth century A.D. The Constantinian forger made a clay mould from a genuine coin, usually, as it would appear, by pressing the obverse and reverse of the coin on two disks of clay and baking the disks; and numbers of these moulds have been recovered, as well as examples of the coins produced from them, which naturally are of approximately the same diameter as, though generally thinner than, the originals. But the makers of the copies found in the hoard now under consideration reduced the designs which they borrowed from the earlier coins to a fairly uniform size corresponding in diameter with the imperial minimi of the Vth century, which meant the preparation of a model on about half scale in the case of copies of IVth-century types ; and this suggests at once that they were not vulgar forgers, but were working under some intelligent direction.

They also differ very materially both in fabric and in artistic merit from the pieces classified as " barbarous imitations." These usually form an appreciable proportion of the contents of Vth century hoards in Egypt ; and, as they occur in fresh condition both near the beginning and towards the end of the century, their manufacture seems to have continued for a long period. They are normally struck on thick dumpy flans, which often do not appear to have been adequately heated before striking, and the dies are of very rude execution in nearly all cases. The types are derived from the imperial coins of the latter part of the IVth century ; there is nothing that can be traced to an original earlier than Valentinian I. It is possible that these pieces may be the output of the official mint of Alexandria, the technique of which under the Theodosian house was decidedly inferior to that of the other Eastern mints, Constantinople, Cyzicus, Nicomedia, and Antioch ; the thick dumpy flans are characteristic of its work at this time, and the dies of the latest issues of Theodosius I and his sons which bear the Alexandrian mint-mark are coarsely executed with blundered legends, and often little better than the " barbarous imitations." A similar class of barbarous copies of the coins of Marcian, Leo and Zeno is found, which may likewise be the output of the Alexandrian mint ; coins of these reigns with the name of this mint do not appear to have been recorded hitherto, but there is one in this hoard of the lion-type of Leo I, and this can fairly be described as barbarous in its execution. The clumsy workmanship of these imitations distinguishes them at once from the " miniature copies," which are thin and neat, and there is a further distinction between the two classes in the range of choice of types.

The " miniature copies," as will be seen from the summary, found their models not only in the coins of the latter part of the IVth century, but in practically all the classes of bronze coinage which were in circulation, and are represented in the hoards formed in the Vth century. There are in the hoard one piece copied from a small Alexandrian bronze of Trajan, and another from an imperial bronze of Probus ; reproductions of the types of Constantine the Great and his family are plentiful, the contrast here to the " barbarous" class is specially noticeable, and those of the Theodosian coinage are equally numerous. The issues of the Vth century down to the reign of Leo are also copied, and, rather curiously, so are the barbarous imitations just described, although it is evident that the workmen who produced the miniatures were much more skilful technicians than those whose pieces they were copying.

Many of the specimens show very little sign of wear, and this, added to the fact that the types copied include those of the reign of Leo, proves that the

THE FEUDAL COPIES MADE IN THE IVTH CENTURY A.D. COMPARED WITH THE IMPERIAL ISSUES OF COINAGE CIRCULATING IN EGYPT.

manufacture of this class was going on till about the date when the hoard was formed. On the other hand, a few examples of this class occur in another hoard, probably buried about A.D. 430, which was found last season by Mr. Starkey at Kom Washim in the Fayûm, so that the output must have extended over a considerable period, probably not less than half a century.

The question of chief interest is, where and by whom these pieces were issued. No coins of this style have been published previously, except two copies of nome coins of Hadrian, described by Dattari (Numi Augg. Alexandrini Nos. 6403 and 6404) as " monete ibeidi " found in a hoard of about fifteen thousand small bronze coins from Medum associated with pieces down to the time of Leo I, which was evidently a hoard of the same kind as this from Qau el-Kebir. No details are given as to the presence or absence of other examples of this class in the hoard, so that it is not much help for determining the place of their origin ; but Mr. Starkey's hoard just mentioned is more valuable in this respect. It includes twenty-two specimens of the miniature copies out of a total of nine hundred and sixty pieces examined, and these specimens are all worn by circulation. The comparatively small proportion of coins of this class, coupled with their condition, suggests that they originated at some distance from the Fayûm, to which a few drifted after passing through several hands in the course of trade, as one found at Hawara in 1888. Conversely, as the Qau el-Kebir hoard contains a substantial proportion of these pieces, many of which are in fresh condition, including several examples from the same dies, it seems probable that they were produced not far from the place where they were found, and where they must have formed a regular element in the local currency.

If this be accepted, the likeliest explanation of their origin is that they were issued under the auspices of one of the great land-owning houses of Middle and Upper Egypt. During the Vth century the authority of the central government became steadily weaker in the Nile valley, and large districts were organised virtually as feudal fiefs, the lords of which collected the revenues, administered justice, and controlled order, keeping their own bands of irregular troops and their own prisons; the extent of their allegiance to Constantinople was represented by the payment of tribute, nominally the proceeds of taxes levied on behalf of the government, and it is clear from the records preserved in papyri of this century and the next that a house such as that of the Apions of Oxyrhynchus was in a position to disregard at its pleasure the authority of the prefects of the province. It would not have been a greater derogation from the imperial privileges than was implied in many of their known proceedings if these lords did issue a private coinage, there was a precedent for local issues to supply the shortage of official currency to be found in the leaden tokens of the IIIrd century, and the Vth-century miniatures paid the imperial coinage the homage of imitating its types instead of devising independent ones like the leaden tokens. Such a coinage of the lords would, at any rate on their own estates, have had quite as effective a guarantee in the eyes of the populace as anything produced by an emperor at Constantinople. The purpose of copying issues of past reigns may have been to avoid laws against forgery of the coins of the reigning emperor, much as the Egyptian government fifty years ago coined Maria Theresa dollars for which no power was responsible.

The fact that these pieces are designed with some degree of technical skill, as noted above, and are not merely mechanical reproductions of the official issues, seems to support this theory. An ordinary forger would only seek to

produce something that would pass muster as a coin in the cheapest and quickest manner, but a great lord who wished to have a coinage of his own would naturally desire it to be of creditable appearance, and would be in a position to employ competent workmen to make moulds and engrave dies, and virtually to constitute a regular mint.

It is true that these coins seem to have circulated over a wider district than that of a single estate; if they were produced somewhere near Qau el-Kebir, they were accepted, as shown above, as far down the valley as the Fayûm and Medum. But there is nothing extraordinary in this if the composition of the hoards which presumably represent the currency of the period is considered. The Egyptians seem in the Vth century to have accepted any bit of metal as equivalent to a coin; every hoard that has been recorded has contained one or more antique pieces of external origin, which can never have had any official status in Egypt; some are from distant autonomous Greek cities, such as that of Neandria already mentioned, with which may be ranked coins of Corinth, Pyrrha in Lesbos, and Cragus in Lycia found in other hoards; others, such as Seleucid and Jewish coins, had not had so far to travel. Again, in all these hoards a great many of the coins are so worn as to be illegible; often it is practically impossible to say whether the smooth disks of bronze were originally coins or not, and occasionally they appear to have been prepared as flans but never struck, and put into circulation without any imprint; these can hardly have fulfilled the proper functions of coins when the guarantor of their value could not be ascertained.

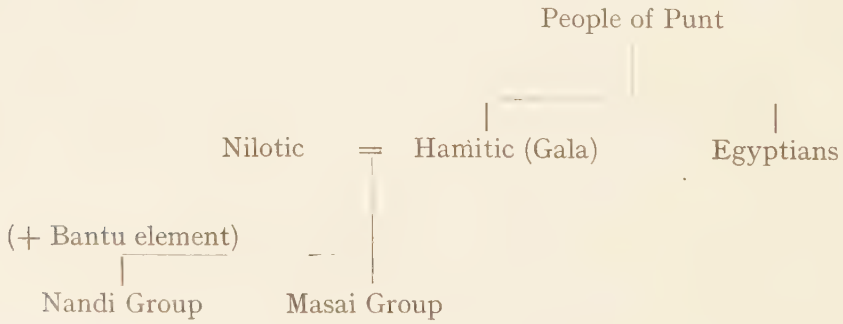
The explanation would seem to be that these pieces of metal were not regarded as having any value derived from their origin, but served simply as counters or units of reckoning—fulfilling the same purpose as, for instance, cowries have done in more recent times in other parts of Africa. A very close parallel was noted at the beginning of the present century in the Saharan oasis of El Wad by Harding King, who found that the local currency consisted of coins of various countries and dates, even Roman, both silver and bronze, mostly defaced, which were simply counted out at the rate of seven to a sou. (*A search for the masked Tawareks*, page 213.) The rapid depreciation of the monetary standard in Egypt during the IVth century made it impossible to attach any permanent valuation to the coinage, some of the coins in these Vth-century hoards had originally been issued early in the IVth century as denarii, but by the end of the century the exchange was quoted at about two million denarii to the gold solidus. The statements of account preserved in papyri of this period do not show what unit these pieces of metal represented, prices and payments are normally given in myriads of denarii, and it is possible that each counter stood for a myriad, but in any case it is obvious that they were as little related to any real value as the paper of a modern bankrupt European state.

J. G. Milne.

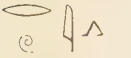
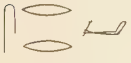
ON THE CONNECTION BETWEEN EGYPT AND THE MASAI-NANDI GROUP OF EAST AFRICA.

The group which comprises the Masai and the Nandi, as well as other less-known tribes, may with propriety be termed "Nilo-Hamitic"; the terms "Nilotic" and "Hamitic," both of which are applied, are inaccurate, since the group is derived from a fusion of Nilotic people (*e.g.* Luo, Acholi, Dinka, etc.) and Hamitic, that is, Gala. To the composition of the Nandi must be added a Bantu strain.

Now, it is sometimes said that the Nandi and Masai are "descended from the ancient Egyptians." This is an incorrect view, and it is desirable that their origin should be made clear. The Nandi and Masai are not descended from the Egyptians, but they and the Egyptians may have had ancestors in common. It seems now to be fairly established that the XIIth dynasty had its origin from "invaders akin to the modern Galla" (Ancient Egypt, 1924, p. 41), which is confirmed by the Gala tradition that "their ancestors had conquered Egypt" (*ib.*, 1925, p. 32). I venture to suggest that not only did the ancestors of the Gala conquer Egypt, but also that the Gala themselves sprang from the stock which produced the Egyptians. It seems not improbable that the land of was somewhere to the north of Kenya Colony, and a region occupied by the Gala; therefore, a supposition that the Egyptians and the Gala have common ancestors may be worth considering. The connection between the various peoples is suggested in the following table :—



I append, with much hesitation, a short list of Egyptian and Nandi words which, it is just possible, may be akin. The resemblance in some cases is very striking, and it seems worth while to put the list on record.

Egyptian.	Meaning.	Nandi.	Meaning.
	eat	am	eat.
	ox	ei [Sukh, egh]	bullock.
	hand	ē [Kony, ā]	hand.
	great (of age)	oo	great.
	march	√U	more.
	cut	√KES	cut.
	arrive	√in paipai	rejoice, joy (= "that which is arrived at").
	sky	pēt	day, daylight.
	abide	meny	live in a house.
	be ill	mian	be ill
	mistake	nĝem	destroy
	flee	rua	rush.
	place	ka	house.
	timber	ket	tree.
	retreat	√KET	go back.
	write	sir	daub (secondary meaning, write).
[stem sher ?]	nose	ser	nose
	love	murer	(girl) lover.

G. W. B. Huntingford.

THE SPENCER-CHURCHILL SCARABS.

Among the treasures which Capt. Spencer-Churchill has collected at Northwick Park, are some scarabs selected for their fine work and inscriptions; these he has kindly allowed to be published here.

1. "Prophet Amenemhat, this *ka* is praised by all." Obsidian—J 13
2. Scribe Ameny, may the excellent *ka* flourish and live. Green jasper—H 80
3. Antef-ka-nefer, son of Mentu-hetep, follower. Green jasper—C 32
4. Knowing the king, Apepa, living again. Obsidian—J 13
5. Scribe of the forecourt, Apsu. Green paste—C 20
6. Lady of the house, Hentsenu. Green—S 30
7. Ka-Hather-hetep (Sacred bark). Amazonite—H 17
8. Kama, may the excellent *ka* flourish. Amethyst—C 4
9. Scribe of the nomes, Kheper-ka. Rich blue paste—C 32
10. Scribe Khu-hez. Green chalcedony—C 42
11. Intendant of the measured land, Mentu-hetep. Blue green—S 25
12. Pepy-nefer-onkh, flourish the power of the *ka*. Amethyst—C 78
13. Royal sealer, peer, intendant of the seal Peremuah. Dark green—T 37
14. Mayor in the South Council of thirty, Ptah-hetep. Blue green—H 41
15. Keeper of the brewery, Să-Hather. Green—S 30
16. Baker of Amen, Să-Rerti. Dark green pot—S 60
17. Scribe over the *khennu* of the Treasury, Sebek-user. Blue paste—M 43
18. Deputy under the king, Samyota. Green blue—S 25
19. Uah-en-nefer-ka. Carnelian—H 68
20. Keeper of the office of the Controller, Ur-neb. Blue green—S 25
21. Ra the excellent, praised, stable, and living every day. Obsidian—H 79
22. Thy praise is an excellent declamation. Amethyst—C 40
23. Ast-sa-hems (Isis protects her servant). In gold ring, amethyst—L 45
24. *Khennu uab IV.* (Four-fold pure temple.) Quartz crystal—L 50
25. *Zed onkh uazui.* Green pot—T 6
26. *Neferu* in scrolls. Blue green—S 25
27. *Hăti nefer, uzati neferti.* Green—S 25
28. *Nub kheper,* etc., symmetric. Blue green—D 32
29. *Uah ka uah.* Green—T 5
30. *Kheper nub,* etc., between scrolls. Dark green—D 74
31. *Nefer ka* in a ring of five spirals. Amethyst—C 4

The type of the back is stated as numbered in *Scarabs and Cylinders* and in *Buttons and Scarabs*; three new types are drawn here below.

This group has an unusual proportion of the Uah epithets belonging to the IXth–Xth dynasties; one-third of all have the legs marked in feather pattern, while only one in fifty is the usual proportion among scarabs of this age.

Below the scarabs is a black steatite cylinder seal of Pepy I. It is one of the well-known class bearing only titles of offices, without the names of

any officials. These seem as if intended to disallow any vested rights to offices. The left column is only a repeat; it begins:—"Royal noble, companion in the palace, officiating by command of his lord, the Horus Merytaui, Ramery, in the palace chief under the king, officiating by command of his lord." On what was formerly the blank side of it, there has been cut in a column of figures of a barbarous kind like those on the buttons of this age. This suggests that the cylinder belonged to one of the Syrian guard, who added signs of his own choice. At the top is what may be copied from two uraei, inverted. Next are two apes seated facing, with tails curling back. Below, three horizontal bars, three vertical, and three horizontal. Below is a man walking with a stick, followed by another, holding perhaps a form of throwing-knife. After an unintelligible group is an inverted group of three men walking, two outer ones with upraised arms; a wavy line is in front, above, and behind the men. This reminds one of the group of men carrying the long serpent, in the tomb of Sety I, and might possibly be an attempt at such a piece of mythology. There is nothing here precisely like the buttons, except the seated apes, yet these figures seem to be due to the same people who made the button badges.

F. P.

REPAIRING THE SPHINX.

The Sphinx is at present being cleared and repaired. This photograph shows the depth of rock-cutting around it, and the casing of small blocks remaining on the paws, as well as the stele of Tehutmes IV between the paws.

SUPPLIES AND DEFENCE.

Agriculture	1271–76	Officers	1380–89
Vineyard	1277–86	Troops	1390–1431
Cattle	1287–1308	Cavalry	1432–41
Provisions	1309–27	Stores	1442–56
Wine and beer	1328–35	Auxiliaries	1457–65
Butchery	1336–40	Forts	1466–73
Catering	1341–45	Ships	1474–1511
Table service	1346–51	Crews	1512–1540
Clothing	1354–79	Trading ships	1541–1550

The agricultural department, and produce, was signified by a plough, with the low handles usual in early times. The intendant of the agriculture (1271) was a common title. There was an overseer of the barn of the new crop of increase, *renp*, the fresh growth referring to a new crop (1272). There was a stable for the ministry of agriculture (1275). The purpose of a messenger to the marsh men (1276) is hard to see.

The vineyards were specially managed in a "northern office of the Delta king's lake and vineyard" (1277), and by an intendant of the vineyard (*kar*) (1278). A vine-dresser is named as *kary*, with a ladder set up to reach the high bunches of grapes (1279). For the vintage there was an intendant of the agricultural men pressing grapes (1280), shewn by the man standing in a vat, as also in the "diwan of agriculture" (1281). The framed wine-press (*shesm*) and vat are the emblems of the vintage in the north-east, the north-west and Sais (1282). An expert of the cellar of wine jars appears (1283), as well as a keeper of the royal wine vats (1284), if we can identify these vessels with the vat in 1282. There was a regular official system in later times, with a scribe of the seat of the intendant in the office of wine (1285), and an overseer of the sealing by the tasters of wine (1286).

The taxing of cattle was an important part of the revenue. In the IInd dynasty the biennial cattle census was so well established that the calendar was counted by it, and we find an official was "sealer of horns every day," having to mark off the cattle as registered by winding a thread round the horn and sealing it (1287). In modern times, when the registrar of cattle comes round, it is surprising to see how many are sent out loose on the desert out of sight. In the title 1288 the goose *să* seems to be used for the *să* guard, properly written with the tethering rope or the amulet, "guard of cattle." A wider scope was that of the intendant of horns and hoofs, all cattle, large and small (1289). The registration *thentet* (1290–2) is formed from *tennu*, "to number," and we see a keeper, a leader, and the intendant of the house, of numbered cattle. In the Middle Kingdom and later a different term was used, *hasb*, to reckon, in 1293–4. There was a separate overseer over the bulls (1296) as they were slaughtered for food, and not registered permanently like the cows. A tribute of a thousand bulls each year was rendered by one nome, and the manager of it was the "leader of a thousand" (1297). Another special official was the intendant of the heifers, *nefertu* (1298). The cattle were tended by *merut* peasants (1299 and *see* 1129–32), and such were taxed (1133); probably they owned these cattle, though working

for wages, and without land, which belonged to the *rekhytu*. The branding of cattle by a keeper (lion for *ari*) is named (1300). The herdsmen, *neru*, were also closely looked after, as there was a scribe of the vezier over the herdsmen's houses (1301). In late times the vezier had a title "controller of all cattle" (1302). Sheep were controlled from the Ist dynasty (1303); the gazelles were herded (1304), and a curious title (1305) is the "intendant of the cattle and sheep of Shu, food for his father." The keeper of asses is noted in the XIIth dynasty (1306), and the messenger of the food (?) for the dogs (1307), as well as the intendant of the dogs' house or kennels (1308).

The registration of provisions began in the IInd dynasty (1309), and various officers of the house of provisions are in the Old Kingdom (1310–13), a "maker of food" (1314), later a keeper of the office of food, marked by lips (1315), who is represented preparing food. For bread there was the intendant of *bat* bread, tall conical loaves, and of *shens* bread (1316), the intendant of the diwan of the office of turn-over loaves (1317), and the overseer of *baă* bread office (1318–19).

The office of intendant of dates in the O.K. (1320), or the controller (1322), was a diwan in the Middle Kingdom (1321). The intendant of honey is named (1323), and of the lotus seed (1324) and the controller of vegetables, *semu* (1325). The potting of food is represented, with the title *mer să*, intendant of preserving (1326), and also of *ho* flesh (1327); in the New Kingdom both the pictures and the jars show how salted meat, pounded meat paste, birds and fat were preserved in jars.

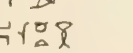
Wine and beer are constantly named in the early offerings, and we find a keeper of the office of wine in the office of dates (1328), and a bearer of jars of *mohert* drink (1329), probably named from the Syrian *moher* soldiers. The brewery carried on by women is mentioned in the IIIrd dynasty (1330), and servants in the office of beer (1331–2); later still is an adminstrator of the office (1333). The brewer, *ofti*, and palace intendant of the cellar have also left titles (1334–5).

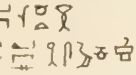
The butchers are named (1336–9), and the slaughter-houses which were kept cool (1340–1). Vague titles are the servants of food (1342), and the keeper of goods entering (1343). Dealers were inspected by an overseer (1344), and an intendant of the dealers in fish, *neshemyt* (1345).

The serving of food was managed by the "royal scribe of the children's table" (1346) or the *onkh* of the chief's table (1347–9), an office perhaps so named as supplying the *onkhu* food, or vivers. There was also a scribe of the table of the wine office, shewing that so important a place was well looked after (1351). The intendant of ointment, *merhet*, seems named in (1352) though the name is re-arranged. In 1353 there is the intendant of *gă*, and *gaut* is the word for a basket or frail, with determinative of a matting bundle rolled and tied up; the tying seems inherent in the sign as it is used for binding; the meaning is probably the bound-up mats of dates, as they were sent in from the oases in bundles like the determinative. This title refers, then, to the dates of Psamthek. The intendant of all the flax, *hemo*, of the king is named in the IIIrd dynasty (1354), and the house of flax is also named in the Old Kingdom (E.E. 248, Peher-nefer).

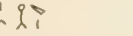
Clothing is a large official subject. The *opr* (1355–59) was apparently a fringed waist cloth, and belongs to the Old Kingdom; there were scribes, intendants, and controllers of it, and it was worn by the king. A linen tunic seems represented in 1360. The object in 1361–2 looks like the long tunic with sleeves, the modern *galabiyeh*, which has been found in the Vth dynasty (*Deshasheh* 31, XXXV). It was provided for the recruits. The other sign for clothing,

1271 IV P.G. VII A

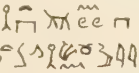
1272  F. 2578

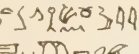
1273  BERL. 1397

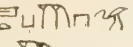
1274 P. Ab. N.N.

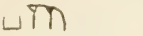
1275  B.M. 675

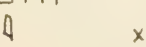
1276 Ro. B.A. 224 N.N.

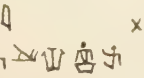
1277  II R.T. II, XXIII 196 N.N.

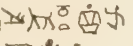
1278  VI MEIR IV, IX

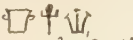
1279  XII N.Bh. I, XXXV

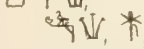
1280  E.E. 248

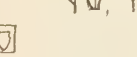
1281  E.E. 248 "

1282  I R.T. I. XXIII, 37

1283  I R.T. I, XXI, 29 N.N.

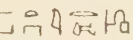
1284  M.K. C. 20186

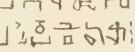
1285  B.M.

1286  Ro. B.A. 225

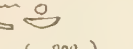
1287 II R.T. II, XXII, 185 N.N.

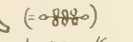
1288 III S.M. I.

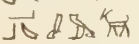
1289  VIII P.D. XI

1290  VII P.D. VIII

1291 B.N. 113

1292  M.K. A.S. XIII, 167

1293  XI B.M. 133

1294  P.S. 286

1295 XI T.C. XXIV

1296 EL KAB 6 L. 572

1297 XII N.Bh. I, 48

1298 XVIII A.S. XIX, 150

1299 A.S. XIII, 236

1300 A.S. XVII, 92 N.N.

1301 PTOL. A.S. XVII, 90

1302 XIX P. SED. L. XXI

1303 I R.T. II, XV, 111 N.N.

1304 XII N.Bh. I, XXX N.N.

1305 A.S. XII, 281

1306 N.Bh. I, XXX

1307 M.K. C. 20613

1308 T. VASE 3228

1309 II R.T. II, XXI, 165 N.N.

1310 III L.D. II. 5

1311

1312 V L.D. II. 43 cd

1313 V L.D. II. 48

1314 IV M.M.D. 12

1315 XII N.Bh. I. A5

1316 M.K. C. 20025

1317 T. 1629

1318 PTOL. A.S. XVII, 92 N.N.

1319 PTOL. A.S. XVII 92 N.N.

1320 IV-V L.D. II 95a

1321 XII P.S. 77

1322 E.E. 248

1323 VI A.S. XV, 210

1324 II R.T. II, XXI, 171 N.N.

1325 IV M.M. C. 23

1326 XII N.Bh. I, XXIX

1327 M.K. C. 20273

1328 M.K. C. 20718

1329 XVIII L.R. 170

1330 III S.M. I, i

1331 M.K. C. 20598

1332 S.U. II, 188

1333 L. V. 49

1334 XII N.Bh. I. 45

1335 O.K. M.M. D 47

1336 RO. B.A. 225 N.N.

1337 B.M.

1338 S.U. II. 176

1339 A.S. XVII, 31-2

1340 M.M. D 25

1341 O.K. S.U. I. 33

1342 O.K. A.S. XVI, 204

1343 M.K. C. 20418

1344 XVIII L.R. 263

1345 XVIII L.R. 20

1346 V. 55

1347 M.K. C. 20282

1348 M.K. C. 20319

1349 M.K. C. 20333

1350 XVIII Q. 286

1351 B.M.

divided below, in 1363–6, appears in early examples to be a thread subdivided to show the number of strands, as proving the quality of cloth. The office of serving out clothing is named in 1364, and the scribe of conformable or suitable clothing in 1366; the latter seems like a uniform, and as the linen was stored

from royal weavers, and served out, it is probable that a special make would distinguish royal servants. A special stuff was made for the king called the exact or perfect, *temt*, (1368). The Greek accounts state the Egyptians to have been very cleanly, and the scenes of clothes washing among domestic duties agree with this. Accordingly there are six different titles about washing linen (1369-74), including a palace expert intendant of washing *sesher* (1371), and a secretary of the washers (1374). Special kinds of clothing are noted, as the office of bright red linen, *da ans* (1375), the sack for clothes (1376), the embroiderer or weaver, *sesheni* (1377), the overseer of making fine linen (1378). The office of great counter, *api ur*, might refer to any branch of store-keeping (1379).

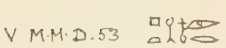
Of the professions, the military was the highest in Egypt. In the Ist dynasty there was a "leader, intendant of troops" (1380); this intendant of troops is generally rendered as general, and such is the obvious equivalent. The *mashou* troops are here spelled at full length (1381–2), and continue thus till the Vth dynasty, but are later only written by the determinative. The word is familiar in Arabic, "walkers" applied to foot soldiers, yet is not in Hebrew or Palmyrene; the other name for troops, *menfi* (1391–4), is similarly unknown, probably a garrison (*see* below). In the Vth dynasty there is a general of recruits, *neferu* (1382). In later times a great general, head one of his majesty is named (1383), and others of the south and north, or of the whole land. Such titles refer to the territorial army which was belonging to different regions (1384–5). Other such titles are "great leader of troops of Egypt," and general of the king in Nubia (1386–7). There is named a general of the local troops in the XVIth nome, Hibiu (1388), also of local troops in the temple of Sety at Abydos (1389).

The troops of the Libyans, wearing the feather, are named in 1390. The *menfi*, I would suggest, are the "exiled," or a standing army moved away for distant garrisons, unlike the troops settled in their own districts. There are four titles concerning them (1391–4), the last of which is peculiar as having the title *kherp* or controller, and there is also a controller of the *serq* troop, from *serq* to open, apparently skirmishers to open the way (1395–6). The *qen* were special "braves," who seem to have been organized as "storm troops," with an "orderer over those under the leader of the *qenyti*" (1397–8). The *menhytu* were the youths, recruits, for whom there was a "scribe of the recruits of the army" (1399).

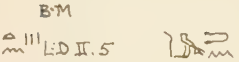
Special men have the titles "Smiter of the enemy" (1400), "Subduer of lands for the king by orders of Horus of the palace" (1401), "keeper of troops" (lion=*ari*, 1402), "great fighter" (1403), chief administrator of troops (1404), or leader of all the troops (1405).

The archers were always a special body, usually Libyans, and regarded as so typically foreign that a usual title of a king was "trampling on the nine bows," and bows were usually figured on the footstool or pathway in the palace. The title of chief archer is never *mer* or *hati* as for other troops, but always *her*, over (1406). The archers of Nubia (1407) were probably from there, as the Egyptian does not seem to have recruited only for Nubia. An interesting title is 1408, "the chief archer of the ship for transport of washed gold," showing that a special treasure-vessel, with safe storage, was employed to bring down the Nubian gold, under guard. This also shows that the Nubian gold was probably stream gold, and not mined as by the Romans. A messenger of Nubia is named (1409).

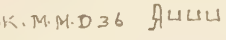
The *thesu*, or troops bound in a company, were archers (1410-11). A peculiar title is "the *sakaru* who is for leading them" (1412); this is Semitic, as most of the military terms, *sakaru*, "hired," a *condottiére* leader, like the Karian and Spartan

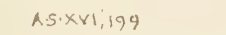
1352  V M.M.D.53

1353 B.M.

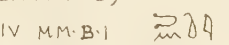
1354  L.D.II.5

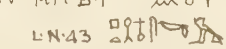
1355 OK.M.M.D.36

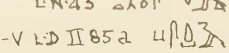
1356  A.S.XVI,199

1357  OK M.M.D.39

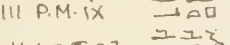
1358 IV M.M.B.1

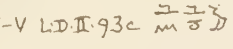
1359  L.N.43

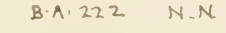
1360  IV-V L.D.II.85a

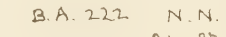
1361  III P.M.IX

1362 IV-V L.D.II.93c

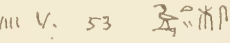
1363  B.A.222 N.N.

1364  B.A.222 N.N.

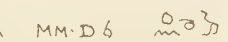
1365  OK. A.S.XVII,92

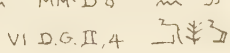
1366  XVIII V. 53

1367

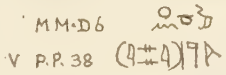
1368  M.M.D.6

1369 VI D.G.II,4

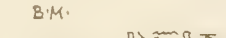
1370  M.M.D.6

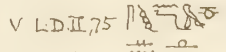
1371  V P.P.38

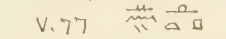
1372 B.M.

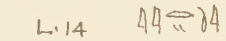
1373  V L.D.II,75

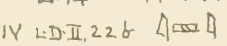
1374 V.77

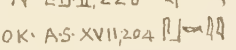
1375  L.14

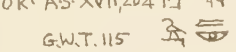
1376  IV L.D.II,22b

1377  OK. A.S.XVII,204

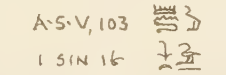
1378  G.W.T.115

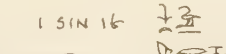
1379  A.S.V,103

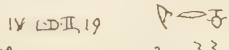
1380  I SIN 16

1381  IV L.D.II,19

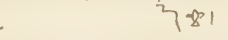
1382 V. L.D.II,43 cd.

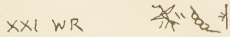
1383 

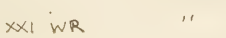
1384  XXI WR

1385  XXI WR

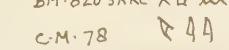
1386 BM.826 SARC.

1387  C.M.78

1388  N.Bh.I.12

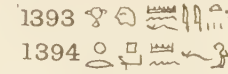
1389  BM.573

1390 XI M.D.11

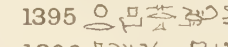
1391  XII L.D.II,138a

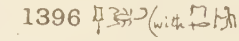
1392 XXII P.H. N.N.

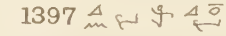
1393 XVIII, L.R.253

1394  P.S. 277 N.N.

1395

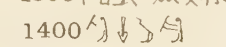
1396  VI Q.S.106,22

1397  B.A.234 N.N.

1398  B.A.234 N.N.

1399 A.S.VIII,34

1400 M.K. C.20283

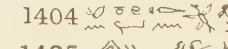
1401  M.K. C.20278

1402 PTOL. A.S.XVII,2. APOLLONIAS

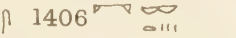
1403 XXVI

1404 RAMESSEUM

1405 A.S.VII,236

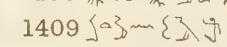
1406  XIX, Z.A.S.III,29

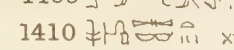
1407 P.J.V,3

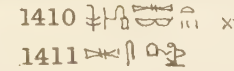
1408  B.A.242

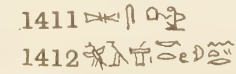
1409 S.U.II,260

1410 XVIII A.S.XIV,30

1411  XXV BARKAL

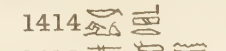
1412  B.A.253 N.N.

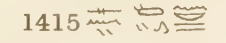
1413  XXI A.S.XVII,29

1414 

1415 B.A.237 N.N.

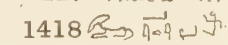
1416 C. L.360

1417  XVIII P.S.CONE 46

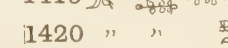
1418  B.A.233 N.N.

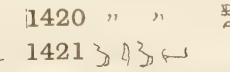
1419 A.S.III 204

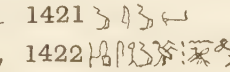
1420 " " A.S.IV,99

1421  OK. L.N.34. B.A.258

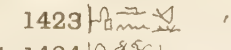
1422 XX B.A.229 N.N.

1423  " " " "

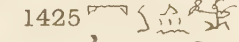
1424  XXVI REC. XXI,67

1425  XX B.A.229 N.N.

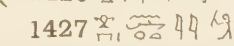
1426 ?

1427  P.B.

1428 IV. L.D.II,97a

1429  SIN 86

1430 B.A.233 N.N.

1431  III P.M.XVI

generals which are recorded. Probably also foreign, is a "leader of those troops of the whole of Egypt" (1413). The *Kelosher* are the kalasires named by Herodotus (1414), who were settled in Upper Egypt and the Eastern Delta. They used swords (Her. ix, 32), and had plaited helmets, hollow shields with large rims, pikes and large hatchets, when engaged at sea (Her. vii, 39). The *senti* (1415) are

the fighters in chariots (*see* 1439). The falchion was an Asiatic weapon, and once there is head falchioner (1416). The *nennu* (1417) were the "goers" light-armed troops. The *anoyt* (1418) were apparently a high class of troops, as they had a fan or ensign bearer. The *său* were guards, perhaps police or watchmen, written with the tether rope (1419–20) or the amulet: there was an intendant over them for the south, perhaps the frontier, and for a nome.

The *uau* (1421), otherwise *uou*, was an under officer, meaning apparently one in sole charge. Scribes are named of the troop, *sehui*, of the soldiers (1422), of the auditor of soldiers (1423), and of soldiers in general (1424). There was an overseer of messengers of soldiers (1425), and a fan or ensign bearer (1426).

Of special troops, there were the strong ones *nekhti* (1427), and the controller, of *neferu* recruits (1428), the house of the mighty of the powerful recruits (1429), this great one (or warden) of *lunău* (1430), which seems as if from לון "abide" or "dwell," meaning garrison troops. Recruits, or lads, were sometimes brought up, and hence "known," in the palace (1431).

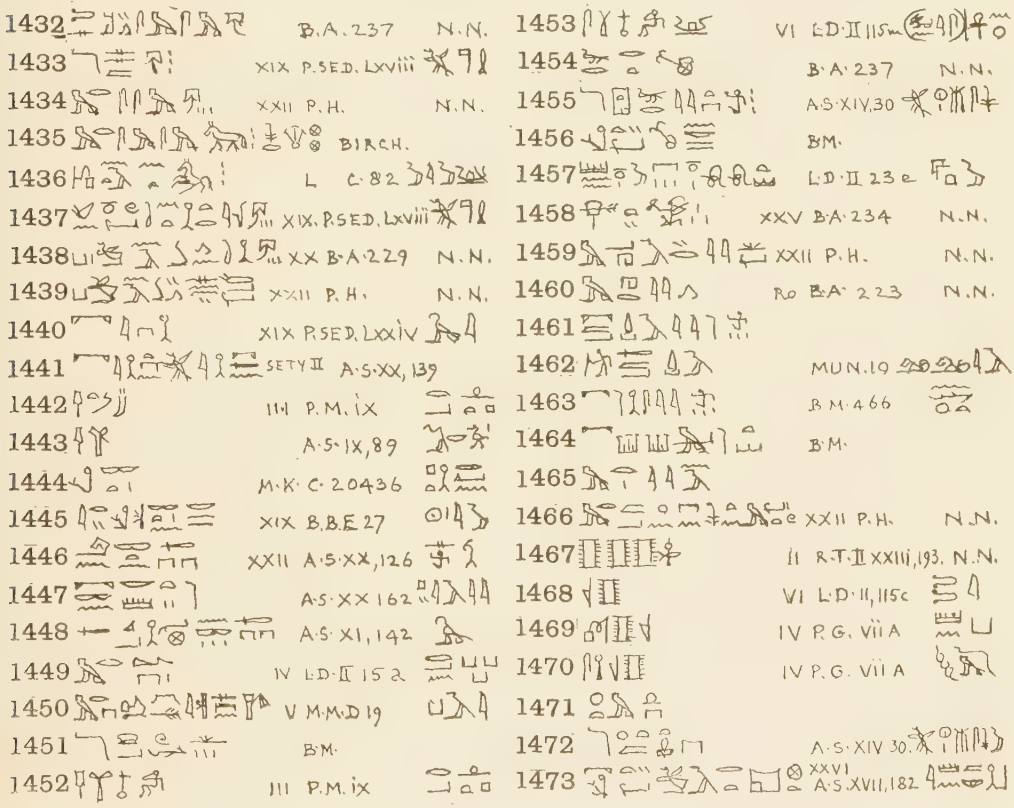
The cavalry was a very important arm in the New Kingdom, when fighting the Syrians who were well horsed. A commander is called the exalted one of horses (1432), a title unknown elsewhere, referring to riding, which was introduced later than chariot driving. The word *sesem* or *sesmet* seems to be earlier than *semsem* for a horse. *Sus* is the Hebrew form, like the Arabic *sisi*; *sesmet* then were mares (*met* mother), and *sem sem* is an ignorant corruption. A different word *hetera* was used for a draught animal, ox, or horse. The administrator of that which is of horses (1437), refers to the harness. The charioteer, *kathena* קצין, captain, of the chariot was the driver of *ta hetera*, the horses (1438), and the fighter, *senni*, is named separately in 1439; this is literally *seni* Hebrew, the second, but it might be a primitive Semitism of *sen*, "brother," Egyptian. The stabling was managed by one "over the stable" (1440), or "over the stable of the palace stable" (1441).

The stores of weapons were usually in charge of a controller or keeper. The controller of bows is clearly indicated by the ends of two strung bows projecting from the case (1442): the word *temă* seems unknown elsewhere for a bow or archer, but it may be connected with *themă*, brave, as an epithet of the Libyan archers, and if *temă* is accepted as the word for a bow, it explains the Temehu, Libyan, as *temă hău* "people of the bow." The sign in 1443 has been explained as a bow-case (Ancient Egypt, 1921, 35). The keeper of the bows is named in 1444-5. The leader of the bows (1446) may rather refer to the archers, as in 1405. In Sinai is the title "over the bows of the Lord of the Menti," Arabs of Sinai. A garrison title is "warden of the corner of the city (corner tower?) of the palace archers" (1448). The house of the khepesh was the name of the factory of arms (1449). There was also a store of weapons, "the house of fighting, bows and arrows, and registry of the ensigns" (1450), and an "intendant of weapons" (1451). The clothing of the recruits was kept by a controller, and there was also a clothier of the naval recruits (1452-3). The intendant and keeper of chariots, *urryt*, are named in 1454–6.

The garrison was *mennu*, the "fortress" people, or "permanent" body (1457). The sharpshooters were the *seti* named by Piankhy (1458). The auxiliaries were various border tribes who had been incorporated in the army, like Germans in the Roman army, where German guards appeared within a generation of the conquests in Germany. There were the *Mohăiry* (1459–60) or light-armed troops, from מהר to hasten, who were brought in by the XIXth

dynasty; the *Mozăy*, named from מצא, to find out, who scouted, and were much used as police in Egypt (1461–2); the *Nehesy* or negroes (1463); and the *Shasha-mo* (1464), probably the Mashauasha or Libyans, as their name was often abbreviated to Mo, and might be sarcastically inverted as Shasha-mo, "the abject Mo." The common name for a chief in Syria was Meryna (1465) or "Our Lord," *mar-na*, which was the name of the god of Gaza.

The camp of the king was under the *mer mokhen ne nesut em nekhtu* (1466), or intendant of the tented place of the king in his strength; חנה, a tent, is familiar in the word *khan* for an inn. In the IInd dynasty there was a director of the forts, the mace with a cord round it being a ruling title in early times (1467). There are various fitters of a fort, *qed*, who did all the carving and fitting up (1468–70). A usual name for a fort was *khetm*, the sealed or closed place (1471–2). There is also an overseer of the keeper of the *thărt* (1473), apparently a fortress; the name of Tartus, *thărta*, shows it to be Syrian, apparently the same as *Thar* or *Thalu*, the frontier fortress.



The idea sometimes stated that the Egyptians were not familiar with shipping is entirely contradicted by the records. In any great tomb, large vessels are figured on the Nile, expeditions were several times made on a great scale down the Red Sea, gigantic vessels were framed for transport of obelisks, and the Nile was accepted as the only great road in the country. The titles show this same familiarity with shipping; there are thirty-five names for different kinds of ships and boats. These names have now all vanished, and the half dozen names now in use all differ from the old ones; the Copt has been forced to an indoor life, and the Arab has taken over the shipping. The names are given in the alphabetic order in the tabular list (1474–1511). The largest vessels were those

called after the Syrian trades, a Byblos ship (*kebnyt*, 1507), "a Tartus ship" (*tharta*, 1510), and a "Cilician" (*kefta*, 1508). Next were those used on the Red Sea, *mensha* (1488), *mer*, 1490 and *oot* (1476). The heavy boats on the Nile were the *oho* or *hou* (1478), also used for chopped straw held down by a net, as at present (*see* 1480), *usekht* (1482), the *sătho* (1502), and the *qăr* (1408), 1505. The *amemu* (1474) was a guard-boat for soldiers, the *mok* (1487) for grain

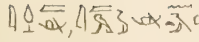
The *sehery* (1501) was a dahabiyeh, and the *mokhen* (1486), *khent* (1497), *qăqă* (1504) were light passenger boats. There were several names of sacred boats only used ceremonially, *atepa* (1475), *bak* (1485), *neshem* (1495), *kher* (1498), *sant* (1499), and *seshem* (1503). The great mythical sunboats were the *monzet*, for dawn (1439), and the evening boat *mesktet* (1492). The remaining quarter of the names belong to common sizes, the purpose of which we cannot yet distinguish.

Various titles of command over ships are found, overseer of the sailors (1512); the head of the boats of the heart of Ra (1513), brings to mind the water of Ra, the canal which ran past Heliopolis to Wady Tumilat; were the boats in the midst of Ra on this canal? Controllers and intendants were usual (1514–15), and there was a leader for the procession of the sacred boat (1516). The expert of boats (1517) was probably over the repairs. The management of the sailors depended on the lieutenant or one in sole charge of the sailors (*khenu*) (1518), the head over the sailors (1519), the ganger of the sailors (1520), the general of the sailors (1521), there was also the scribe of the sailors (1522), and the plain name of sailor (1523); these were all rowers, but there was a more definite handling of sails by the *nefu* (1524). The men, *să*, of the sacred boat were probably porters, as well as the *hemu* (1525–6).

The pilot was *am merti*, in the eyes of the boat, standing between the two eyes painted on the bows (1527). There was also the "keeper of the front" (1528), as a look-out man. The steersman was the "keeper of sitting," as from prehistoric days he squatted on the stern, holding the long steering oar (*Hierakonpolis* LXXVII). The pilots, *det*, were registered (1530), implying that they were examined as to competence. The word *opt*, "to equip" occurs in several titles; in Sinai it only belongs to the chief boatmen, and means the equipping of the boats, and not the sailors; Brugsch translates it sailors (B.A., 252), but if in some cases it refers to the crew that may be as part of the equipment, *see* 1531. The boat equipper, 1532, is in Sinai, and there are titles of intendant of the equipments of great ships and of the king's ships (1533–4). There were artisans, ship's carpenters (1535), and messengers, or cabin boys (1536). Also a scribe at the side of the ship, to register what went in and out (1537), and "headman of the sides of the ship, keeper of its things that fall in the water," a man to keep watch on anything falling overboard (1538). There was an intendant of the ships of the harem of the palace, and of the ship of the palace of Tahutmes III (1539–40). The sealed chamber on a ship (1541) must be the strong-room for valuables.

An important commercial post must have been the "secretary of accounts of the Byblos-ship in (faring) as far as Punt," in the VIth dynasty (1542). Another secretary was for the *oho* ships over its moorings (*hătetu*) (1543), registering the positions of the shipping. The keeper of the office of mayor of the dockyard, shows that there was a harbour-master, and there was an elder of the dockyard (1544–5). The boat-builder, or "maker of the *oot* boats" (1546), and the price *baku* for boats (1547) are named; also the merchants and traders who came to deal at the ships (1548–9), with their wares (1550).

FLINDERS PETRIE.

1474  T.18
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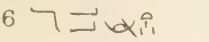
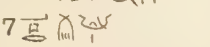
1476  SIN. 23
1477  B.A. 250
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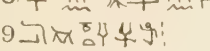
1479  BM
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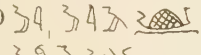
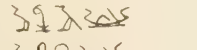
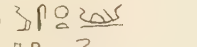
1481 
1482  P 427
1483  VI P D II A
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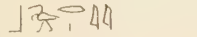
1485  XVIII C N. 105-6
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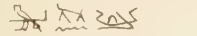
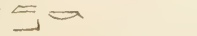
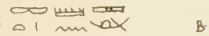
1487  B.W. 576
1488  BA 261, BDG 421 N N
1489  S U II. 163
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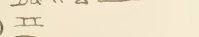
1491  S.U. II, 163
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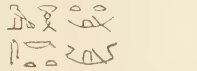
1493  VI B.N.E 138
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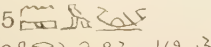
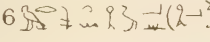
1497  B.A. 251
1498 
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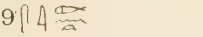
1501  SETNA
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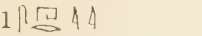
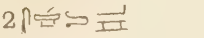
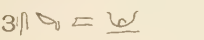
1503 
1504  P.P. XXXI
1505  P.HAR. I. 78
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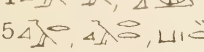
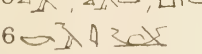
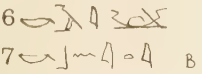
1507  B A 250 L.D. II 152 a
1508  XIII- B.A. 250
1509  V B.N.E. 138
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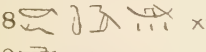
1511  V B.N.E. 138
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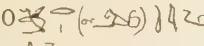
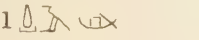
1513  B.M.
1514  B.A. 260
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1521 LV. 10
1522 B M 320
1523 SIN 137 N.N
1524 MK. C. 20444
1525 B.A. 260
1526 B.A. 252
1527 VI SIN. VIII
1528 B.A. 259
1529 B.A. 259
1530 V L.D. II. 426
1531 MON. D. II 19 c
1532 VI SIN 16
1533 IV L.D II. 97 a
1534 A.S XVIII 30
1535 B.A 253
1536 MK. C 20407
1537 VI P.D. V
1538 S U I 130
1539 P.S. 134
1540 R M H. I, iv 9, 202
1541 B A. 2 54
1542 S U. I. 134
1543 MMP 8
1544 B A.
1545 D M 532
1546 XII B M. 155
1547 B A 253 N. N.
1548 B A 261 N. N
1549 B A 261 N. N.
1550 B A 253 N. N.

EGYPTIAN WORKING DRAWINGS.

MANY years ago a petty dealer of Lahun brought me a roll of papyrus, broken across the middle and much shattered, which had been found at Gurob, almost certainly of the XVIIIth dynasty. Only a few stray lines could be seen, and no inscriptions, so it was readily passed to me. On damping it flat, and piecing the fragments, it proved to have been a roll 21·7 inches wide and over 60 inches long. It was divided into squares by red lines, and the working drawings were in black. These were of the front and side view of a wooden shrine, suspended in a naos framework, for being conveyed in processions. Where in the front view the inner shrine cornice would be hidden by the outer framework, the parts in front are of thicker line, and those behind are of thin line for distinction.

The side view gives the clearest rendering. At the top is the long roof of the framework, curved at the front end, where it bears a single uraeus. It is supported by two pillars, the back one the longer, the front one shorter, as being under the cornice: the capitals are double-bell shaped. These pillars run slanting down to the base-beam. At a lower level than the front cornice is seen another cornice, within the pillars, which is that supporting the roof of the shrine, also curved as above described. Below the cornice there is a framing, under which is the *pet* sign of heaven, to mark where the top of the decoration would come.

At both the top and the base there are two connections of twisted rope between the shrine and the framework. These seem plainly intended to sling the shrine from the top of the frame and to secure it from swaying by staying it to the base beam. The need of such slings shows that this was not to be carried by men, but to be drawn along on a sledge, like the great shrines in funeral processions.

The purpose of the curved top is now intelligible. If a heavy shrine was hung from a straight bar it would bend it down and so shorten the length, thereby straining the supporting framework. By curving the support, a strain would lengthen the frame; but by having it straight at one end and curved at the other the changes due to weight would be neutralised. Thus a form of spring was devised which could be fastened firmly at the ends while yielding freely to weights. The shape seems to have pleased the Egyptian, and it was copied for the firm lids of boxes and caskets. It was used at the end of the Vth dynasty (*see* Shedu in *Deshasheh*, XXV), but is rare or unknown earlier.

In the front view there is a disc and uraei in the middle of both cornices, and also on the lintel over the door. Half-way down the front there is a *pet* sign across it, marking the top of a scene. The opening of the shrine, then, only revealed the upper half of the figure within.

Working Drawing of Side View of Shrine.

It might be supposed that regular squares were based on a unit of measure, though modern custom for divided note-books ignores units. The papyrus has been so much damaged that continuous measurement can only be of value on short unbroken portions. From eight of the best of these, the mean value is 1·3614 inches; among slight variations in different parts some extend to a scale of 1·373. Certainly there would have been some contraction by age; the amount of such change is quite unknown, but it is hardly likely to exceed a hundredth. This size of square is not related to Egyptian measures, as there is no authority for dividing the cubit by 15, =1·375. It might be half of the Punic palm, an eighth of the foot; the longest, or least contracted, portion here gives 1·373, which × 8 = 10·98 inches. The Punic foot varies from 11·08 to 11·17 (Ancient Egypt, 1923, 34); so supposing a contraction of a hundredth it would just bring this originally to the size of the best example—that from the Byblos sarcophagus. On the whole this seems fairly probable. Why the Egyptian chose such a size was probably to make the squares fit actual measurements of the shrine. Such shrines usually appear as about the height of a man in the scenes, and this could not be very much smaller, or it would have been carried by hand, and not have needed slings to check vibration. The squares, then, would represent about 3 inches on the work, or the usual palm. The course of procedure seems to have been that the designer, knowing that a shrine 14 palms in width was needed, took the widest roll of papyrus and, being unable to get it into the width on half size, he took a smaller measure for his squares, using the Punic palm as the most convenient measure at hand. He then ruled up the roll with red lines, ticking off the scale with dots to begin with, and ruling between these end-marks. The accuracy was about equivalent to the nature of the drawing, having a mean error of division of one hundredth to one fortieth of an inch in different parts. These drawings are now at University College. There is no reason to suppose that this squared papyrus was exceptional; the town and temple at Gurob were of no importance, and there is not a word of writing or any figures on this to show that it was a special drawing. For once, we have a glimpse of the cabinet-maker's method of preparing working drawings on squared paper: this is as curiously like modern practice as the pyramid builders' use of facing planes for testing work. Our practical methods are very old.

Flinders Petrie.

WORKING DRAWING OF FRONT VIEW OF SHRINE.

REVIEW.

Kings and Queens of Ancient Egypt. Portraits by WINIFRED BRUNTON. History by eminent Egyptologists. Large 8vo, 163 pp., 18 plates (14 in colour). (Hodder and Stoughton.)

Restoration is a dangerous affair, and it is therefore all the more valuable when it is successful, as in this book. The flood of mock Egyptian drawing which has confounded the public taste, even in specialist books, is here rebutted by the results of real knowledge and a most carefully checked intuition. This has given the world a truer view of the great monarchs than had been reached before. In search for expressing character, Mrs. Brunton has adopted rather a late age in some cases, where younger heads would have been more popular. It is cruel to show the prophet of beauty, Akhenaten, as in his last illness; Nefertyti has also passed from the exquisite firmness and tone of her bust into being a careful mother; Sety I, in the Abydos heads and the profile of his mummy, has a touch of the audacity of his son, and is less careworn than here. No doubt we see in the paintings one form of the truth, but other expressions might have given a brighter aspect.

Various authorities have written the character biographies which accompany the portraits. These are fairly exhaustive in giving a realization of the ruler, and will doubtless be accepted and quoted as describing the moving personalities of the early ages. It may be well to guard, then, against trifling inaccuracies. On p. 25 *erpati-hati-a* should be noted as a title in the IIIrd dynasty (*Medum* XVI); on p. 27 the greatest mass of granite work in the IVth dynasty should be remembered. Under Pepy I might also be noted his great series of cylinders with official titles but no names, issued in order to break the family claims to offices. Under Amenemhat III may be added the serpentine head in University College, closely like his Cairo statue; it seems impossible to identify with that the obsidian head, or a host of other heads rashly attributed. On pp. 84–5 Benert-mut (or Nezem-mut) should be named not as the aunt, but the sister-in-law, of Akhenaten, being the sister of Nefertyti; this increases the probability of her survival to the close of the dynasty. On pp. 95–8 there is no value given to the rays represented as acting, which were a new feature added to the sun worship, and which are a remarkable scientific expression. Thus there was a very essential difference from all the sun figures that were known before. The Aten hymn (p. 102) remains the prototype, and until an earlier form can be found of such poetry it must have the credit of originality. On p. 108 it is said that it is impossible to give any tangible meaning to *living in the truth*; this ignores all the art and new ideas of that time. Akhenaten's fanatical regard for the truth made him require to be sculptured kissing the queen when out for a drive, dancing her on his knee, and playing with their children in public. Surely this is sufficient token of living in the truth! The black Ramessu II of Turin is called kingly (p. 134), but earlier kings looked ahead impersonally at their duties, while Ramessu is smirking down at the spectator to see if he is impressed by such a fine fellow. Minute points may well be put right in such a work, which is so nearly all that could be wished as the realization of the mighty dead.

Syria. Tome VI, 2me fascicule.

DUSSAUD, R.—*Dédicace d'une statue d'Osorkon I, par Eliba'al, roi de Byblos.* This is a half-length figure, and part of the base, cut in red quartzite; the work is not Egyptian, and though the cartouche on the chest and on the base is fairly cut, the dedication in Phoenician is scattered in vertical lines all over the surface, like the Assyrian inscriptions across their figures, but as no Egyptian would think of doing. As regards the forms of the letters, while eight agree most nearly to the XIIIth-century forms, five agree better to the IXth-century alphabet of Mesha. The translation is, "This statue is made by Eliba'al, King of Gebal, in consecration to Ba'alat-Gebal for himself. May she prolong the days of Eliba'al and his years of reign over Gebal." There is also a piece of a statue of Sheshenq I, with a dedication on the base, "offered by Abiba'al King of Gebal and the taxer of Gebal in Egypt to Ba'alat-Gebal and to Ba'al-Gebal." The "taxer" is *Negash*, otherwise "taskmaster" or "oppressor." The deputy of the king who managed the tribute seems probably intended. The portrait of Osorkon is so rare that we beg to copy it here.

In the *Bibliographie* is stated M. Montet's reading on the scimetar of Byblos, "The Prince of Kapni (Byblos) Yp-shemu-abi, renewing life, born of the Prince Abi-shemu deceased."

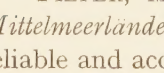
Proceedings of the Russian Academy. History of material Culture, 1924. *Ushabti and Sarcophagi in the Hermitage Museum.* F. F. Gess. Photographs and texts are here issued of (1) a wooden ushabti, in a model sarcophagus, of Tehutimes, a *nesut hetep* on the sarcophagus, and part of the chapter on the ushabti. (2) Text of another wooden sarcophagus, for Tehutimes from his sister. (3) Another sarcophagus and ushabti for the same. (4) Model mummiform coffin of pottery with vertical band of the *sedm osh em ast măot Sen-nezem,* and cross bands of the four genii; enclosing a wooden ushabti with extract of the chapter. (5) Model mummiform sarcophagus of similar type for a royal scribe, intendant of the palace Huy. (6) A plain model sarcophagus.

Egyptian cylinders of the Golénichef Collection. N. D. Flittner. This gives drawings of fourteen cylinders, one of Pepy I, the other of archaic style, for which transcriptions are proposed.

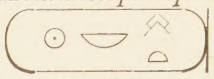
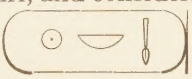
Zeitschrift für Ägyptische Sprache. Vol. LX, 1925.

This volume is dedicated to Dr. Erman by his students and friends in honour of his seventieth birthday.

KEES, H.—*Zu den ägyptischen Mondsagen.* This article deals with the myths concerning the moon as one of the Eyes of the Sky-god, and with the moon-god Thoth. The religious terminology used in these myths is full of allusions to the mythology of other gods, particularly of Osiris, and reveals early and complicated

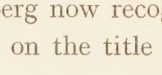
borrowing and interlacing. Herein lies the explanation of references, such as "the left shoulder of Osiris which is in Letopolis," whilst the key to the use of the symbol  , "leg" for the moon is to be found in the equation of the "leg" in *ḥt sbḳ* with the body of Osiris in his character of moon-god.

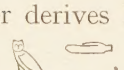
Rusch, A.—*Ein Osirisritual in den Pyramidentexten.* Scattered about in the Pyramid Texts the writer detects a ritual which was specially created for Osiris at the time of the spread of his cult. In the author's opinion, the most important part of his treatise consists in proving that, so early as the Vth dynasty, the scenes to which these texts served as litanies were actually performed at the festivals of the god to avenge and restore him to life.

Bonnet, Hans.—*Zur Baugeschichte des Mentuhoteptempels.* The writer rejects Borchardt's view that Mentuhotep II ( , whom he calls Mentuhotep III) built the pyramid and terrace of the XIth dynasty temple at Deir el-Bahri, and considers the whole structure to be the monument of Mentuhotep III only ( , whom he calls Mentuhotep IV). Bonnet explains the anomalous character of the structure as an effort to combine the burial methods of the Theban dynasty with those of the Old Kingdom pyramid builders.

Pieper, Max.—*Die ägyptischen Skarabäen und ihre Nachbildungen in den Mittelmeerländern.* The article emphasises the desirability of a compilation of reliable and accessible reproductions of the most important finds of scarabs outside Egypt. A comparison of all the available specimens would show, for instance, whether the scarabs found in Greece of post-Mycenean and pre-Saite date were imported by the Phoenicians or were of local workmanship.

Davies, N. de G.—*The Place of Audience in the Palace.* This article is a discussion of "the pictures of the window in the palace at which Akhnaton appears in public, and the interesting relation between architectural features and the depiction of them which this particular erection exemplifies."

Spiegelberg, W.—*Die Datierung des Berliner "Trauerreliefs."* This relief depicts the funeral procession of a high-priest of Memphis. It was published and dealt with by Erman in *Zeitschrift,* XXXIII (1875) p. 18 ff., Pl. I. Erman dated the relief to the XIXth dynasty or end of the XVIIIth. In the dignified figure who comes after the sons and takes precedence of the other exalted mourners, Spiegelberg now recognises Horemheb before his accession. This identification is based on the title  , and confirmed by the style.

Spiegelberg, W.—*Die neuägyptische Präposition m-dr "wegen."* The writer derives New Empire , *m-dr* and Boheiric ⲛⲧⲉⲛ- "because of" from  , *m. dt* (literally "by the hand of") followed by the genitive *n.* He cannot, however, apply this explanation to the expression , *m.dy,* which is used in the same sense in New Empire (before nouns and pronouns) and in demotic (before pronouns only), and which corresponds to Coptic ⲛⲧⲁ≥.

Gardiner, A. H.—*The Autobiography of Rekhmerē'.* In this paper Dr. Gardiner gives a restoration, with critical notes, of the sadly battered inscription published by Newberry in Pls. VII and VIII of *The Life of Rekhmara.* The inscription comprises forty-five lines of hieroglyphs which occupy the southern end wall of the tomb. Sethe's edition of this inscription (*Urk.* IV, 1071–85) depended upon Newberry. Dr. Gardiner's careful examination of the wall showed

that in a large number of cases where the actual sign has perished, the surrounding plaster has preserved the contours either entire or in part. "Of specific events in his career, Rekhmerē' has recorded but one, namely, his promotion to the highest magistracy in the land," nevertheless the text "seems a good example of what the Egyptians considered that an autobiography should be. . . It abounds in unusual words and phrases."

RANKE, H.—*Tiernamen als Personennamen bei den Ägyptern.* Many personal names which appear to be the name of an animal are in reality abbreviations of phrases in which the animal represents the king or a god, *e.g. mꜣy* "lion" is short for *mꜣy. m. ḥḳꜣ*, "the lion is the ruler." In the category, Names of Animals as Personal Names, the writer deals only with personal names in which the name of an animal is used as such. Some two dozen animals are represented in these names, which were, it is suggested, used in the first place as pet-names.

GRIFFITH, F. LL.—*Tomb Endowment in Ancient Egypt.* Professor Griffith notes an attempt in the Middle Kingdom to improve on the Old Kingdom practice by substituting a single *ka*-priest for several.

KEES, H.—*Grammatische Kleinigkeiten.* These consist of notes on the form of absolute pronoun used after the conjunctions or , or , and the emphatic particle , and on the use of the negative verb *ỉm-* in verbal sentences with a *noun* as subject.

WILCKEN, ULRICH.—*Punt-Fahrten in der Ptolemäerzeit.* Berlin Pap. 5883+5853 is the earliest known document recording a mortgage on a ship. Wilcken dates it to the middle or first half of the IInd century B.C., and suggests Alexandria as its place of origin. The document concerns the loan of an unknown sum to five men by one Archippos for a voyage to *Aromatophoros* (*Punt*) for *ἀρώματα*. These men are bound to repay the loan within a stated period after their safe return. As a guarantee, five other persons go bail, giving as security their persons and their entire property, but the creditor has no claim on the ship or cargo, as he has in all other mortgages on ships which are known.

CRUM, W. E.—*Koptische Zünfte und das Pfeffermonopol.* A Coptic papyrus, Or. 8903, contains an acknowledgment on the part of some twelve city companies of Edfu for a grant of pepper, and thus adds to our knowledge of the pepper monopoly and the trade guilds. Each company in turn binds itself to distribute the allocation to its well-to-do members only, and with one exception (*not* the doctors !), the presidents have to sign by proxy as they cannot write.

JUNKER, H.—*Die christlichen Grabsteine Nubiens.* This article embodies the results of recent research on the distinctive character of Christian gravestones from Nubia. In these steles are reflected the origin and development of the Nubian church : its founding by Byzantium, the influence of the Coptic church and the survival of the Byzantine impress. Nubia is the only country outside Egypt where Coptic monuments have been found, and the Greek tombstones outnumber the Coptic. In Egypt, Coptic remained the national language even when Greek became for a time the official and business speech. Conditions in Nubia were totally different. Coptic was, indeed, necessary for intercourse with Egypt in the northern district, but the spread of this language to the south must be explained otherwise. The presence of Coptic tombstones in the southern districts is traceable to the use of Coptic as a second church language, owing to the later ecclesiastical dependence of Nubia on Egypt, and to the increased influx of Egyptian monks in consequence of the Mohammedan persecutions. L. B. ELLIS.

NOTES AND NEWS.

British School of Archaeology in Egypt.

The examination of the cemetery in the Bahrein Islands by Mr. MACKAY has produced several forms and kinds of pottery, some with patterns ; also a spear-head and a heavy lance-head of copper or bronze. The back of an ivory figure has been fairly carved, with a narrow waist ; unhappily the front was destroyed anciently. The comparison of these should be made with remains from Arabia, but that is yet unknown ground. The richer tumuli had been plundered anciently, and the majority contain very little, owing to the breaking of pottery before burial and the salt damp of the soil destroying metal. This is an interesting beginning in a new field, and the connections of it should be important. The objects will be in the July exhibition at University College.

The fuller examination of the Badarian sites in the Fayum is described in the first article of this number. When the whole of the results can be drawn up, the earliest civilisation will be well defined, perhaps more completely than in any other country. The exhibition will be July 5th to 24th.

Mr. SANDFORD has been searching over the gravel of the Qeneh and Qau region, far into the deserts, and hopes to work out their age and human connections.

New Publications by Prof. Petrie. (1) The catalogue of *Buttons and Design Scarabs*, the first long series yet published of the button badges which came from the Syrian invaders ; there is also a supplement of later additions to the Scarabs with names. (2) The *Descriptive Sociology* of the Egyptians, carrying on the Herbert Spencer series ; this is a classification of what is known of the life, beliefs, and abilities of the Egyptians, under 436 headings. The system of the series was to rely on extracts, but for Egypt a large part had to be written-up for the first time, especially for the prehistoric stages of the various subjects.

Other Excavations.

At the subterranean temple of Abydos, Mr. Frankfort is actively clearing, assisted by an engineer, Mr. Felton, a student, Mr. Baly, and for inscriptions a copyist from Brussels, M. Van der Walle. News of the important lowest structure cannot be hoped for till the water is exhausted in the summer. It must always be remembered that the present water-level is twenty feet or more above what it was at the time of construction, and no lake or well existed then in the building.

After the impulsive claim of the Egyptian Government to publish what is discovered, but little is allowed to be known about the progress of the two controlled works on the royal burials. That near the Great Pyramid is now supposed to be a parent of Khufu on *a priori* reasons from its position, no new facts being stated. Nothing more is said about the belt with the name of Sneferu.

The very important excavations at Kish and Ur, and the still more astonishing works of the early Punjab and Baluchistan, are opening entirely new chapters of history, which cannot yet take their true place. The statue from the Punjab has on the robes the trefoil rosette characteristic of Babylonia.